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**UNITED STATES DISTRICT COURT
 NORTHERN DISTRICT OF CALIFORNIA
 SAN JOSE DIVISION**

JESSICA L. LAYSER, individually and
 on behalf of all others similarly situated,

Plaintiff,

v.

FACEBOOK, INC., a Delaware
 corporation headquartered in California,

Defendant.

Case No.

CLASS ACTION COMPLAINT

DEMAND FOR JURY TRIAL

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1 Plaintiff Jessica L. Layser, by and through undersigned counsel, hereby brings this action
2 against Defendant Facebook, Inc. (“Facebook”), on behalf of herself and all others similarly situated,
3 and alleges as follows:

4 **I. NATURE OF THE CASE**

5 1. Facebook is the dominant online social network in the United States and in the world.
6 Initially, Facebook used its false promises of data security and privacy protections to overtake its early
7 rivals and become the dominant force in the market for person social networking. As it recognized,
8 once it won the initial battle for supremacy, its foothold in social networking would be protected. In
9 particular, because a personal social network is generally more valuable to a user when more of that
10 user’s friends and family are already members, a new entrant faces significant difficulties in attracting a
11 sufficient user base to compete with Facebook.

12 2. Facebook holds monopoly power in the market for personal social networking services
13 in the United States, which it enjoys primarily through its control of the largest and most profitable
14 social network in the world. Facebook monetizes its personal social networking monopoly principally
15 by selling advertising, which exploits a rich set of data about users’ activities, interests, and affiliations
16 to target advertisements to users. Facebook in fact specializes in selling social advertising, a unique
17 market for advertising built around the very specialized and granular data that Facebook is able to
18 collect on its users and their contacts in light of its monopoly in the personal social networking space.

19 3. Social advertising allows Facebook to identify the perfectly targeted audience for any
20 potential advertiser’s product and then evaluate the results of those advertisements based upon very
21 specific user data regarding how each user interacted with the advertisement. That allows addition
22 refinements and enhancements to the advertisement itself as well as the target audience. Because
23 Facebook is unique in the level of social data that it can gather, it has a firm hold on the market for
24 social advertising and has been able to monetize its product to a staggering degree. Last year alone,
25 Facebook generated advertising revenue of more than \$70 billion and profits of more than \$18.5
26 billion.

27 4. With that much at stake, Facebook has adopted numerous anticompetitive practices to
28 preserve its monopoly in social networking and consequently in social advertising. The company has,

for many years, continued to engage in a course of anticompetitive conduct with the aim of suppressing, neutralizing, and deterring serious competitive threats to Facebook. That conduct has included, among other things, utilizing data from third parties to identify burgeoning competitive threats, acquiring potential competitors before they can actually compete, and utilizing anticompetitive terms and practices with respect to application programming interfaces (“APIs”) that are made available to third-party software applications. Among other things, Facebook used its APIs to gather data from which it could assess potential threats and then punished and suppressed some promising threats (e.g., Path, Circle, and various messaging apps) while preventing and deterring others from even becoming threats in the first place. These anticompetitive practices allowed Facebook to acquire and maintain monopoly power in the market for personal social networking and the market for social advertising.

5. As a result of this anticompetitive conduct, Plaintiff and members of the Class were forced to pay supra-competitive prices for advertisements they purchased directly from Facebook.

II. PARTIES

6. Plaintiff Jessica L. Layser (“Layser”) is a realtor with her principal place of business in Langhorne, Pennsylvania. During the Class Period, Plaintiff Layser purchased advertising directly from Facebook.

7. Defendant Facebook is a publicly traded, for-profit company, incorporated in Delaware and with its principal place of business at 1601 Willow Road, Menlo Park, CA 94025.

8. Facebook is a social media company that provides online services to more than 3.14 billion users. Facebook owns and operates several business divisions, such as:

- **Facebook**. Facebook’s core social media application, which bears the company’s name, is, according to Facebook’s filings with shareholders, designed to enable “people to connect, share, discover, and communicate with each other on mobile devices and personal computers.” The Facebook core product contains a “News Feed” that displays an algorithmically ranked series of content and advertisements individualized for each person.
- **Instagram**. Instagram is a social media photo-sharing application that allows users to

share photos, videos, and messages on mobile devices. Facebook acquired Instagram in April 2012.

- **Messenger**. Facebook's Messenger application is a multimedia messaging application, allowing messages that include photos and videos to be sent from person to person across platforms and devices.
- **WhatsApp**. WhatsApp is a secure messaging application used by individuals and businesses. Facebook acquired WhatsApp in 2014.

III. **JURISDICTION AND VENUE**

9. This Court has subject matter jurisdiction over the Plaintiffs' federal antitrust claims, brought under Section 2 of the Sherman Act, 15 U.S.C. § 2, and Sections 4 and 16 of the Clayton Act, 15 U.S.C. §§ 15 & 26, pursuant to 28 U.S.C. §§ 1331 & 1337.

10. The Court has personal jurisdiction over Facebook because (1) Facebook is subject to general jurisdiction in the State of California, where it maintains its headquarters and principal place of business, (2) Facebook transacted business in the State of California, including in this District, during the Relevant Time Period; (3) Facebook had substantial contacts with the State of California, including in this District, during the Relevant Time Period; and (4) the claims brought in this lawsuit arise out of actions taken by Facebook in the State of California, including actions taken in this District.

11. Venue is proper in this District under 15 U.S.C. § 15(a), 15 U.S.C. § 22, and 28 U.S.C. § 1391. Defendant Facebook resides and transacts business in this District; and the claims brought in this lawsuit arise out of events or omissions that occurred, in substantial part, in this District.

12. This action is properly assigned to the San Jose Division of this District, pursuant to Civil Local Rules 3-2(c) and (e), because Facebook is headquartered, and a substantial part of the events or omissions that give rise to the claim occurred, in San Mateo County, which is served by the San Jose Division.

IV. **BACKGROUND**

A. **Social Networking**

13. In the early 2000s, the widespread use of personal computers enabled a new way of connecting and communicating with other people online: social networking with friends and family.

Friendster, launched in March 2003, was one of the first personal social networks to gain significant popularity, and Myspace followed soon after. Half a year later, in February 2004, Mark Zuckerberg and his Harvard College classmates launched Facebook (then styled “TheFacebook”).

14. In contrast to the limited functionalities of email and messaging, personal social networking gained popularity by providing a distinct and richer way for people to maintain personal connections. Personal social networking enables people to stay up to date and share personal content with friends and family, and has become an integral part of the daily lives of millions of Americans.

15. Through an account on a personal social network, users can post content about their own lives and interests, and view what their personal connections have posted. In doing so, they can stay up to date about the lives of people they care about. During a single session, a person can read about one friend’s recent vacation, another friend’s thoughts on a local restaurant, and a relative’s wedding announcement. The person can also post their own content, and interact with their friends’ posts through comments, replies, and reactions. Thus, personal social networking gives people a personalized social space in which they can share content with their personal connections.

16. At a high level, the participants in the social media industry include the following: social media platforms (who run social networks), consumers, advertisers, and content providers (which can be any of the previous three types of market participants, or can be third parties).

17. Typically, social media companies do not charge consumers money for using their social networking services. Instead, social media platforms monetize the vast amounts of data they are able to obtain from users through the innumerable interactions occurring in the network.

B. Facebook.

18. Facebook launched first on college campuses, but within a few years it had expanded to the general public. Soon after that, Facebook surpassed both Friendster and Myspace, presenting itself as a more premium, private, and personal social networking experience. By 2009, Facebook had established itself as the most popular personal social networking provider in the United States and the world. Since that time, Facebook has remained the number one provider of personal social networking in the United States and the world.

19. Facebook’s core offering to consumers is access to its social media network, which

contains the individualized profiles of well over 200 million users in the United States and billions of users worldwide. In exchange for access to the only social media network that allows consumers to connect online with most of their family, friends, and acquaintances, Facebook requires users to provide their personal data and receive targeted advertisements.

C. Social Advertising.

20. Social advertising is distinct from other forms of advertising, including other forms of display advertising, search advertising, and “offline” advertising (e.g., television, radio, and print).

21. Social advertising is a distinctive form of display advertising. Display advertising refers to the display of advertisements—in the form of images, text, or videos—on websites or apps when a user visits or uses them. Display advertising is distinct from “offline” advertising, such as TV, radio, and print advertising, because it offers the ability to reach consumers during their online activity (including during their use of mobile devices like smartphones and tablets), allows for interactive ads, and permits rich ad targeting to users using personal data generated and collected through their online activity. Display advertising is also distinct from search advertising, which is a form of digital advertising that is shown to a person when he or she enters a specific search term in an online search engine, like Google or Bing. Advertisers buy search advertising to target consumers who are actively inquiring about a particular type of product or service. By contrast, display advertising reaches consumers who are not actively querying a search engine, including consumers who may be further from making a specific purchase decision.

22. Social advertising is a type of display advertising, but it is distinct in several ways from the non-social display advertising on websites and apps that are not personal social networks. For example, in part because users must log in to a personal social network with unique user credentials, social advertising enables advertisers to target users based on personalized data regarding users’ personal connections, activities, identity, demographics, interests, and hobbies. Also, in contrast to display advertising on other websites and apps, social advertising leverages high engagement and frequent contact with users, as well as the integration of advertisements directly into a user’s feed of content generated by personal connections (including ads that resemble “native” content and boosted content). Social advertising also facilitates forms of engagement with the advertisement that are not

1 available with other forms of display advertising— such as allowing a user to share an advertisement
 2 with a personal connection, or to “like” or follow an advertiser’s page. Among other things, the
 3 foregoing characteristics enable social advertising providers to sell advertisers access to personally
 4 targeted “audiences” of highly engaged users, and to reach users who need not be actively searching
 5 for—or even aware of—the advertised product or service.

6 23. As Facebook’s Chief Operating Officer (“COO”) Sheryl Sandberg stated in a 2012
 7 earnings call: “[O]n the question of where advertisers are, you know as I’ve said before, we are a third
 8 thing. We’re not TV, we’re not search. We are social advertising.”

9 **D. Facebook’s Use of Data to Maximize Advertising Value.**

10 24. Facebook has a preeminent ability to target users with advertising due to its scale, its
 11 high level of user engagement, and its ability to track users both on and off Facebook properties.

12 25. Facebook characterizes each user’s disclosure of his or her identity as increasing the
 13 value of the experience for all users, who are purportedly able to benefit from others’ disclosures by
 14 connecting with and following the activities of their real-world connections. In reality, disclosure
 15 increases the market value of the information Facebook obtains from its users. Knowing the internet
 16 habits of any generic user is less valuable than knowing the browsing habits of a specific individual
 17 whose identity can be linked with information about their shopping habits, income, family, friends,
 18 travel, dining, dating, and a myriad of other data points.

19 26. In the years since its inception, Facebook has tracked trillions of data points about
 20 consumers with a powerful data structure that it calls the “social graph.” The social graph concept
 21 “refers to Facebook’s ability to collect, express, and leverage the connections between the site’s users,
 22 or as some describe it, ‘the global mapping of everyone and how they’re related.’”¹ All of the data on
 23 Facebook can be thought of as a “node” or “endpoint” that is connected to other data on Facebook:
 24
 25

26 ¹ See John Gallaughier, *Getting the Most Out of Information Systems* § 8.3 (quoting A. Iskold, “Social
 27 Graph: Concepts and Issues,” ReadWriteWeb, September 12, 2007), available at
 28 [https://2012books.lardbucket.org/books/getting-the-most-out-of-information-systems-v1.4/s12-
 facebook-building-a-business-f.html](https://2012books.lardbucket.org/books/getting-the-most-out-of-information-systems-v1.4/s12-facebook-building-a-business-f.html) (last accessed December 30, 2020).

1 You're connected to other users (your friends), photos about you are tagged,
 2 comments you've posted carry your name, you're a member of groups, you're
 3 connected to applications you've installed—Facebook links them all.²

4 27. Given Facebook's size and reach, as well as the extent of its surreptitious user data
 5 collection, the social graph is a unique and uniquely valuable dataset, even among the giants of the tech
 6 world. Much of this value stems from the fact that Facebook's social graph mostly cannot be viewed by
 7 the public or search engines, and contains extraordinary amounts of data that users unwittingly
 8 provided Facebook regarding their most minute everyday habits.

9 28. The personal data of Facebook's users take many forms including data about the
 10 information users share on their personal profile pages, the photos and profiles users have viewed, what
 11 information users share with others, and even what users put in messages to other users. This granular
 12 data allows the targeting of users on a scale that has never before existed.

13 29. That data can be, and is, monetized by commercializing access—for example, by
 14 providing application developers, content generators, and advertisers with direct access to the
 15 information embedded in Facebook's network, such as the interconnection between users, user
 16 attributes, and user behavior. Facebook is a so-called "walled garden"—a closed ecosystem run by a
 17 single operator. Advertisers must go through Facebook in order to reach Facebook users. And
 18 Facebook can decide how much of its social graph it allows app developers to access.

19 30. Facebook's platform allows advertisers to target Facebook's users by their attributes and
 20 behavior. Facebook's machine-learning algorithms mine patterns in the user data for advertisers which
 21 allows those advertisers to reach precisely the right audience to convert into sales, user signups, or the
 22 generation of sales leads.

23 31. Facebook has recognized the unique characteristics of the advertising that a personal
 24 social network can offer. In earnings calls, Facebook COO Ms. Sandberg described Facebook as the
 25 "world's first global platform that lets marketers personalize their messages at unprecedented scale,"
 26

27 ² *Id.* (citing A. Zeichick, "How Facebook Works," Technology Review, July/August 2008).
 28

and called Facebook and Instagram the “two most important mobile advertising platforms” in the world.

32. Facebook’s social advertising business, serving ads to users of its personal social networks reflecting its vast access to data, is extraordinarily profitable. According to its public earnings reports, Facebook earns “substantially all of [its] revenue from selling advertising placements to marketers”. Facebook’s advertising revenue in 2019 was nearly \$70 billion.

V. RELEVANT MARKETS AND MONOPOLY POWER

33. There are two markets applicable to this dispute. They are: (1) “the Social Network Market”; and (2) “the Social Advertising Market.” Facebook has unlawfully acquired and maintained monopoly power in both markets.

A. The Social Network Market.

34. The Social Network Market is the product market consisting of personal social networks, which are websites (and accompanying mobile applications) that: (1) facilitate users of a given network finding, interacting, and networking with other people either whom the users already know or to whom they are connected through others they already know online; and (2) provide users with additional substantive features beyond the ability to communicate with other users and share multimedia.

35. Three key elements distinguish the Social Network Market from other forms of social media or other online services provided to users.

36. *First*, personal social networks are built on a social graph that maps the connections between users and their friends, family, and other personal connections. The social graph forms the foundation upon which users connect and communicate with their personal connections, and can reflect friendships, online conversations, a desire to see someone’s updates, visits to places, and other shared connections to personal interests and activities, including groups, locations, businesses, artists, and hobbies. Personal social network providers use the social graph as the backbone for the features they offer users, including the two other key elements of personal social networking discussed below.

37. *Second*, personal social networks include features that many users regularly employ to interact with personal connections and share their personal experiences in a shared social space,

including in a one-to-many “broadcast” format. In this shared social space, which may include a news feed or other similar feature, users share content—such as personal updates, interests, photos, news, and videos—with their personal connections. Personal social network providers can use the social graph to inform what content they display to users in the shared social space and when. This generally applies to all forms of content on social networks, including user-created content like user “news feed” posts, publisher-created content like news articles, and advertisements.

38. ***Third***, personal social networks include features that allow users to find and connect with other users, to make it easier for each user to build and expand their set of personal connections. The social graph also supports this feature by informing which connections are suggested or available to users.

39. While users may engage with other websites and apps, other types of internet services are not adequate substitutes for personal social networks.

40. Personal social networks are distinct from, and not reasonably interchangeable with, specialized social networking services like those that focus on professional (e.g., LinkedIn) or interest-based (e.g., Strava) connections. Specialized networks are designed and used primarily for sharing a narrow and highly specialized category of content with a narrow and highly specialized set of users for a narrow and distinct set of purposes.

41. Personal social networking also is distinct from, and not reasonably interchangeable with, online video or audio consumption-focused services such as YouTube, Spotify, Netflix, and Hulu. Users employ such services primarily for the passive consumption and posting of specific media content (e.g., videos or music) from and to a wide audience of often unknown users. These services are not used primarily to communicate with friends, family, and other personal connections.

42. Additionally, personal social networking is distinct from, and not reasonably interchangeable with, mobile messaging services. Mobile messaging services do not feature a shared social space in which users can interact, and do not rely upon a social graph that supports users in making connections and sharing experiences with friends and family. Indeed, users of mobile messaging services generally do not and cannot query a mobile messaging service to find contact information they do not already possess, nor can they query the service to find other users connected to

the people, places, things, and interests that matter to them. Instead, users of mobile messaging services employ those services primarily to send communications to a small and discrete set of people generally limited to a set of contacts entered by each user. Zuckerberg described this distinction in a 2019 post, calling personal social networking providers like Facebook “the digital equivalent of a town square,” and contrasting the private communication offered by mobile messaging apps like WhatsApp as “the digital equivalent of the living room.”

43. Search engines, such as Google, Yahoo, or Bing, are not “social networks” because they do not provide for interaction between platform members. Similarly, apps like Apple’s “iMessage,” which simply allow the sharing of messaging media, such as emails or text messages, are not social networks because, although they provide for interaction, they do so only in a device-to-device manner and focus solely on delivering messages rather than facilitating a broader online social experience. Facebook itself has noted this distinction, explaining in documents provided to the House Antitrust Subcommittee that whereas the growth of Apple’s iMessage is “limited by the adoption of iPhones, . . . Facebook’s products can be used across devices.”³

44. There are no reasonable substitutes for personal social networks. Social media platforms, such as YouTube and TikTok, primarily exist to allow users to stream, share, and view content. By contrast, firms in the Social Network Market provide users of a particular network an online community that brings together users who specifically choose to associate with one another. In addition, Social Networks, such as Facebook, provide a “rich social experience” to users through unique product features.⁴ Social Media platforms, like YouTube and TikTok, do not provide or facilitate a similar use and instead offer only limited opportunities for social interaction, or interaction of a very different type that complements, rather than substitutes, for a social networking experience.

45. Beyond the “rich social experience” that personal social networks provide to users,

³ See Investigation of Competition in Digital Markets, Majority Staff Report and Recommendations (“House Report”), Subcommittee on Antitrust, Commercial, and Administrative Law of the Committee on the Judiciary, at 136 n.752 (Oct. 4, 2020), *available at* https://judiciary.house.gov/uploadedfiles/competition_in_digital_markets.pdf.

⁴ *Id.* at 91.

1 consumers also use personal social networks differently than other social media platforms. Social
 2 networks “facilitate their users finding, interacting, and networking with other people they already
 3 know online,” whereas the broader category of “social media” platforms “principally facilitate the
 4 distribution and consumption of content” between “users with a wide range of relationships to the
 5 person posting, including by strangers.”⁵ Thus, while a user might use YouTube to access and watch a
 6 complete stranger’s video—such as a cooking recipe—the same user would use Facebook, not
 7 YouTube, to share that video with the user’s friends, family, and real-world connections. Similarly, a
 8 user that finds a funny video of a celebrity (or other stranger) on YouTube may choose to encourage
 9 their friends and family to view that video by sharing it with them on Facebook with a note.

10 46. Additional factors make clear that different social media platforms are used in parallel
 11 to—rather than instead of—social networks. For instance, many consumers use both YouTube and
 12 Facebook, rather than one over the other. This dual use is facilitated by the social media platforms that
 13 make it easy for a user to share the content he or she finds on a platform through that user’s personal
 14 social networking account. For example, if a user clicks the “SHARE” button that appears underneath
 15 a video on YouTube, that user is offered an option to post a pre-populated hyperlink of that video
 16 automatically to the users Facebook page by simply clicking the Facebook icon on the screen.

17 47. **Geographic Market.** The United States is the relevant geographic scope of the Social
 18 Network Market. The United States is a relevant geographic market due to several factors, including
 19 differences in broadband access and social norms that vary at the country level. In addition, network
 20 effects between users are generally stronger between users in the same country, because for most users
 21 the vast majority of relevant friends, family, and other personal connections reside in the same country
 22 as the user. Accordingly, users in the United States predominately share content with other users in the
 23 United States. For users in the United States, a social networking service that is not popular in the
 24 United States, even if it is popular in another country, is therefore not reasonably interchangeable with
 25 a social networking service that is popular in the United States. Facebook and other industry
 26

27 ⁵ *Id.*
 28

participants recognize these distinctions and track their performance, and that of rivals, separately by country.

B. Facebook Has Monopoly Power in the Social Network Market.

48. Facebook holds monopoly power in the Social Network Market, and has held such power continuously since at least 2011.

49. As noted in the House Report, “Facebook has monopoly power in the market for social networking. Internal communications among the company’s Chief Executive Officer, Mark Zuckerberg, and other senior executives indicate that Facebook acquired its competitive threats to maintain and expand its dominance. . . . Facebook’s monopoly power is firmly entrenched and unlikely to be eroded by competitive pressure from new entrants or existing firms.”⁶

50. As noted in the House Report, recent Facebook documents “show that [Facebook] has tipped the social networking market toward a monopoly, and now considers competition within its own family of products to be more considerable than competition from any other firm.”⁷

51. As noted by the House Report:

Facebook has monopoly power in the market for social networking. According to internal documents produced by Facebook to the Committee, it has high reach, time-spent, and significantly more users than its rivals in this market. Despite significant changes in the market—such as the advent of mobile devices, applications, and operating systems—Facebook has held an unassailable position in the social network market for nearly a decade, demonstrating its monopoly power.⁸

52. In addition, Facebook has dominant market share in the broader social media market. As reflected in Facebook’s internal documents, it has estimated that it is “95% of all social media in the US[.]” And, more than 80% of the time that consumers in the United States spend using social media is spent on Facebook and Instagram.

⁶ *Id.* at 12-13.

⁷ *Id.* at 13.

⁸ *Id.* at 133 (internal citations omitted).

53. Facebook’s monopoly is durable because it the Social Network Market (and the broader social media market) is a market with strong network effects and high barriers to entry.⁹

54. **Network Effects.** A network effect is the phenomenon by which the value or utility a user derives from a good or service depends on the number of users of the same good or service. Network effects may be either direct or indirect. Direct network effects arise where a product or service becomes more valuable to users as additional others use the product or service. Indirect network effects exist when greater use of a product or service incentivizes third parties in a different customer group to also engage with that product or service.

55. As an example of direct network effects, take, for instance, an instant messaging application. Even if a messaging application has the very best encryption technology, superior look and feel, and is easy and intuitive to use, the product is worth comparatively little to a user if few other users have downloaded it. Messaging is only valuable if you can send and receive messages with people of your choosing. The more users who download the application, the more valuable it becomes to each of them. The Social Network Market exhibits obvious direct network effects: “no person wants to be on a social network without other users.”¹⁰

56. The powerful direct network effects inherent in the Social Network Market made competition at the early stages for the field rather than within the field.¹¹ The House Report recognized this point as it relates to Facebook, explaining that Facebook’s network effects are “very strong” and that “there are strong tipping points in the social networking market that create competition for the market, rather than competition within the market.”¹²

57. The content generated by a social network’s user base also creates strong indirect network effects and, in turn, increases the value of the social network to advertisers and the network provider itself. With each photograph, relationship status, check-in, or post by a user, the social

⁹ *Id.* at 37–45.

¹⁰ *Id.* at 41.

¹¹ *Id.*

¹² *Id.*

1 network provider becomes more valuable, not just as a means of communicating with directly
 2 connected acquaintances, but also as a means of learning about more remotely connected ones.

3 58. As a result of this economic reality, markets that exhibit strong network effects tend to
 4 be “sticky,” or accompanied by high switching costs. Once a significant number of users adopt a
 5 product, they will be reluctant to switch to even a superior competitive alternative, because the newer
 6 offering will not deliver as much value unless many other users make the switch simultaneously. This
 7 feature of network-effect markets produce a period of intense, early competition, after which a single,
 8 dominant player often becomes entrenched. Facebook itself suggested in an internal memorandum,
 9 with respect to social media platforms and networks, “either everyone uses them, or no-one uses
 10 them.”¹³ A fair and level playing field during the initial phase of early competition is thus crucial to
 11 maximize consumer welfare, as is a level playing field if a new type of social network platform arises
 12 that threatens to supplant an old one.

13 59. **Barriers to Entry.** High barriers to entry refer to fixed costs that a competitor must pay
 14 to enter a market that incumbent players need not incur. Switching costs impose a barrier to entry. To
 15 induce a user to adopt a new product in a market that has high switching costs, a competitor must incur
 16 not only the expense of building a superior product, but also the added compensation to defray a user’s
 17 cost of switching. An incumbent does not incur this added cost, retaining a cost advantage that is at
 18 least equal to the switching cost the competitor must absorb. Where switching costs are high, the
 19 incumbent’s competitive advantage is high as well.

20 60. High switching costs in the Social Network Market make a social network harder to
 21 compete with once it has obtained a monopoly. Users may be connected to one another exclusively
 22 through a given provider’s network, leaving that provider as the only method for users to remain in
 23 contact with one another. Faced with the possibility of losing contact with each other, users who would
 24 otherwise switch to another social media platform or network may choose not to do so because of these
 25 high switching costs.

26
 27 ¹³ *Id.* at 141.
 28

61. Similarly, the lack of portability of users' data presents an additional switching cost. To illustrate, "a user may upload a variety of data to Facebook, including photos and personal information, but (by Facebook's design) may not be able to easily download the data and move it to another social media site; instead, the user would have to start from scratch, re-uploading her photos and re-entering her personal information to the new platform."¹⁴ Facebook has just these network effects and high switching costs.

62. Facebook's tight grasp on other social apps presents another switching cost for consumers. For instance, users of the popular music streaming service Spotify frequently sign up for Spotify using their Facebook accounts. But users who enroll in Spotify using their Facebook accounts "can't disconnect it" to use Spotify after leaving Facebook; users generally must set up new accounts on Spotify. In doing so, they lose access to their previous playlists, listening histories, connections with other users on Spotify, and other data.¹⁵ This discourages would-be defectors from ultimately leaving Facebook.

63. These network effects, switching costs, and other advantages occasioned by Facebook's dominance (such as its access to unlimited social data) made it nearly impossible for potential competitors to gain appreciable market share regardless of their size. For example, in 2010, Google launched a new product that was seeking to compete – Google+. Google+ was Google's attempt to build out a "social graph" that would leverage a common user identity across Google products, including YouTube and Gmail.

64. With Google+, Google sought to replicate the essential product features and functionality of Facebook. The planned features for Google+ included a continuous scroll product called the "stream"; a companion feature called "sparks," which related the "stream" to users' individual interests; and a sharing app called "Circles" to share information with one's friends, family, contacts, and the public at large.

¹⁴ *Id.* at 42.

¹⁵ *Id.*

65. Google+ entailed a massive investment of resources to bring a finished, full-scale social-media network to market. Google conscripted almost all of the company's products to help build Google+. At its peak, Google+ involved 1000 employees from divisions across the country. Google even required employees to use the Google+ Hangouts video chat feature, which was supposed to help drive adoption in the tech industry and beyond.

66. Google's attempt to compete with Facebook failed, however, because it could not attract the critical mass necessary to deliver a viable social network and therefore to overcome the network-based switching costs from which Facebook benefited. Germany's Federal Cartel Office specifically attributed Google+'s difficulty in competing with Facebook to network effects, which Facebook had built and continued to exploit due to its misrepresentations regarding the privacy protections its users supposedly enjoyed.

67. Even though Google+ continued its efforts to compete from its inception in 2010 until 2018, it was never able to take appreciable market share away from Facebook because of these strong network effects and barriers to entry.

C. The Social Advertising Market.

68. The Social Advertising Market is a submarket of the wider online advertising market.¹⁶

69. Social advertising is the process of creating and deploying clickable ads to reach target audiences utilizing social media platforms, messaging apps, news feeds, and even outside apps and websites. This type of advertising is particularly effective at driving engagement and conversions because of its use of the data-rich and highly personalized environment of social media, and in particular, the social networking environment.

70. Using the highly specific and actionable user data that social networking provides, audiences can be defined based on past behavior and purchase history; and users can be matched up with target persona demographics and interests. As a result, even when targeted audiences are unfamiliar with the brand and/or product being advertised, the message still has a good chance of resonating and getting an immediate response.

¹⁶ *Id.* at 170.

71. Because of the deep swath of personalized and granular data available to social networks, social advertising is not fungible or interchangeable with the other forms of online advertising.

72. Market and industry participants including industry experts, academics and government regulators, recognize social advertising as distinct from other forms of advertising.

73. Social advertising has peculiar characteristics and uses driven by the detailed amount of information that can be collected about users as they engage on social media platforms. Facebook, for example, can target ads by, among other things, specific audiences. It allows an advertiser to choose from targeting “Core Audiences”, “Custom Audiences” and/or “Lookalike Audiences.” With “Core Audiences,” the advertiser “set[s] the rules for where [their] ads are delivered. Adjust [their] target audience to be as broad or well-defined as [they] like, based on” location, demographics, interests, behavior and connections. With “Custom Audiences,” the advertiser can “connect with people who have already shown interest in [their] business, whether they’re loyal customers or people who have used [their] app or visited [their] website” including contact lists, site visitors and app users. Facebook’s “Lookalike Audiences” “are a fast and effective way to connect with people likely to respond to [the advertiser’s] ads. All [they] need to do is create a source audience of people [they] know” and then Facebook will target “people with common interests and traits.” In other words, Facebook is able to algorithmically combine a subset of its users to create an audience to fit an advertisement. This capability is unique to social advertising. Because of the level of granular data Facebook collects from its users, it can provide targeting flexibility like no other advertising medium.

74. Social advertising is also marked by the ability to algorithmically refine advertising targeting as users interact with the ads. The advertising process in this scenario is a back-and-forth—data is used to target an audience, the audience’s response can be assessed on a granular level, and then changes are made to the advertisements to make them resonate with the audience. Facebook allows users to place a pixel on their website that is pulled off Facebook’s servers when the site is accessed. Facebook is thus able to determine the efficacy of ads run on Facebook once the user transitions to an advertiser’s own website. Over time, Facebook’s advertising becomes more targeted and more effective in terms of particular advertising goals, such as lead generation or online purchases.

75. Other social media providers, such as Twitter, provide similar targeting abilities. Twitter, for example, allows targeting based on location, language, device, age, and gender, but also allows for the targeting of audience types, including algorithmically tailored and custom-created audiences.

76. These targeting features, which are available on social advertising platforms, are not comparably available as part of other forms of online advertising, such as display and banner ads or search ads.

77. Social advertising is unique in that it requires data collected from users in the very type of social networking environment Facebook provides. For example, a user's search history will not provide the granular level data to create highly targeted advertising features like those enabled by Facebook's Lookalike Audiences.

78. Providers of social advertising require specialized means of production because they must rely on data harvested from engagement among networks of users to facilitate highly targeted advertising. Platforms capable of delivering social advertising must therefore provide functionality such as image and video sharing, messaging, matchmaking, content sharing, and other inherently social features in order to obtain the data needed to allow for granular user and user network targeting. Because social advertising allows iterative refinement of target audiences, a provider of social advertising must employ machine-learning or artificial intelligence algorithms that are trained on data collected from users as they interact and engage with content and advertising.

79. Other forms of advertising generally do not require sophisticated machine learning or artificial intelligence. For years prior to the advent of modern machine-learning techniques, search engines such as Yahoo and Google used far less sophisticated algorithms to match user searches with suggested websites and, in turn, advertisements. Traditional advertising, such as magazine or television ads, require no algorithms at all, let alone artificial intelligence.

80. Social advertising customers are distinct from search advertisers and passive display advertisers. Moreover, social advertising is generally more effective at targeted advertising as opposed to reaching a massive number of people.

81. Customers advertising on search engines are generally seeking priority among the search results returned given a particular keyword. Customers advertising on social media platforms are searching for users that fit a particular, predefined profile or set of characteristics. Small businesses that do not generally have the budget to bid on coveted search results are nonetheless able to pay for granularly defined audiences on a social media platform like Facebook.

82. Social advertising prices are distinct from other forms of advertising. Because bidding on Google Ads and other search-based advertising is zero sum, meaning only a certain number of ads can be coupled with a particular set of search keywords, pricing is more sensitive to changes in demand. In search-based advertising, certain search keywords are bid up by many advertisers seeking to have their ads displayed as part of search results. This means that prices in certain categories, such as legal or home improvement, will be significantly higher on search-based platforms than on social advertising platforms like Facebook.

83. That is because social advertising allows granular targeting, avoiding much of the zero-sum nature of other forms of advertising bidding. Moreover, social advertisers like Facebook can tailor audiences, reducing the likelihood that advertisers will have to compete for the same display opportunity at any given point in time.

84. Other general forms of advertising such as television and print are even more zero-sum, as there are limited time slots or available pages in a newspaper or magazine. Pricing is thus more sensitive to demand in these forms of advertising.

85. Social advertising is thus entirely distinct. Because of the ability to target audiences to advertising, pricing is proportional to the generality of the targeting, not simply to the general demand for a limited search term, key word, or periodical placement.

86. **Barriers to Entry**. The main barrier to entry into the Social Advertising Market is the accumulation of social data. Without a critical mass of social data, market participants in the Social Advertising Market cannot generate revenue. Moreover, without adequate social data and engagement within the social network, market participants cannot display content to users that would provide enough value to generate engagement and additional social data. Likewise, without a critical mass of

social data, advertising targeting will not be possible or will be substantially diminished in effectiveness, thus reducing revenues from the advertising sales in the market.

87. Because the Social Advertising Market is a product of the vast amount of social data collected by market participants, the same network effects and barriers to entry that exist in the Social Network Market also exist in the Social Advertising Market.

88. **Geographic Scope.** The geographic scope of the Social Advertising Market is the United States. The social data that fuels a social advertising product must be compatible with the customers purchasing it. An advertiser seeking to sell products designed for consumption in the United States may not have any use for a platform's advertising targeting capabilities outside of the United States.

D. Facebook Has Monopoly Power in the Social Advertising Market.

89. Facebook has monopoly power in the Social Advertising Market.¹⁷

90. This market power is derived from the monopoly power Facebook has in the Social Network Market from which it is able to obtain the necessary social data.

91. Facebook's revenue share of the Social Advertising Market is approximately 80% and its share has been above 70% since 2015.

92. Moreover, Facebook has been able to consistently raise its prices in almost every year it has sold advertising without facing pricing pressures from competitors. On a cost per mile (CPM)—or cost per thousand advertising impressions—basis, Facebook's advertising prices rose 90% year over year according to a report at the end of 2019. In 2018, Vox reported that CPM prices on Facebook had increased 122% year over year. In 2017, Facebook's CPMs increased 171%. Facebook raised prices in prior years as well.

93. Facebook's advertising revenue has steadily grown both in the United States and globally. Facebook reported advertising revenues totaling \$17.383 billion as of Q3 2019. Approximately \$8.3 billion of that advertising revenue came from the United States.

¹⁷ *Id.* at 70.

94. From 2014 to 2016, Facebook’s advertising revenues grew from \$2.9 billion to \$6.436 billion. During that period, and even before then, Facebook was one of the few social networks that significantly monetized its network by selling advertising. Other competitors did not come close, and Facebook established unrivaled dominance in the Social Advertising Market and maintains that dominance to this day.

95. Twitter, one of Facebook’s only competitors to sell significant social advertising during the same period Facebook generated revenue in the Social Advertising Market, has never exceeded \$800 million in advertising revenues. Twitter’s revenues in Q1 2012 were approximately \$45 million, growing to \$432 million in Q4 2014, and standing at \$702 million as of Q3 2019.

96. LinkedIn, another competitor that sells social advertising, generated roughly \$2 billion in overall annual revenue by the end of 2018, with some portion of that coming from advertising.

97. Considering the revenue generated by LinkedIn and Twitter, Facebook’s advertising revenue accounts for approximately 86% of the total revenue share across the three largest firms competing in the Social Advertising Market.

VI. ANTICOMPETITIVE CONDUCT

A. Facebook Originally Gained Its Market Share Over Other Social Networks by Deceiving Consumers About Its Privacy Policies.

98. For years, Facebook has engaged in a pattern of deception about the volume of data it obtains and the extent of the data harvesting and use by third parties its platform has long enabled. Its deception has only recently begun to come to light.

99. Privacy practices were a crucial form of competition in the early days of the Social Network Market. After its founding in 2003, MySpace soon dominated the Social Network Market. By 2006, MySpace supplanted Google as the most visited website in the United States. Notably MySpace offered an “open” platform, allowing all interested users to join MySpace. Moreover, MySpace users could sign up for MySpace using unverified usernames and pseudonyms.

100. By 2007, overwhelmingly negative headlines began drawing attention to MySpace’s lax privacy practices. In particular, users, parents, and critics alike attributed sexual assaults, suicides, and murders to MySpace, speculating that MySpace’s open platform—which cloaked wrongdoers with

1 relative anonymity, an added level of covert protection—triggered these events. By that time,
2 competitors to Myspace including Friendster, Orkut, Flip.com, Bebo, and Facebook had begun to
3 emerge.

4 101. Given MySpace’s prominence in the Social Network Market, Facebook sought to
5 differentiate itself from MySpace in order to entice users to join Facebook. Facebook initially
6 distinguished itself on the basis of its strict privacy settings, including its closed-network approach.
7 Importantly, Facebook promised users that it would disclose its “information and privacy practices”
8 and that it would “not use cookies to collect private information from any user.”

9 102. In 2006, some 250 million people around the world used a social media platform:
10 100 Million used MySpace, 12 million used Facebook, and the remainder used a number of other
11 competitors. In 2007, user growth at MySpace began to come to a halt—by mid-2007, Facebook had
12 begun to supplant MySpace as the most visited social media platform in the United States. Facebook’s
13 representations to consumers regarding its data policies were instrumental to Facebook’s gaining
14 market share at the expense of its rivals, including MySpace. A 2004 consumer survey revealed that a
15 majority of Americans indicated that privacy was a “really important issue that [they] care about often.”
16 Another study focused on early Facebook users’ attitudes towards privacy, finding that they cared more
17 about privacy policy than about terrorism. Individuals in academia compared Facebook users’
18 satisfaction with Facebook’s privacy settings to MySpace users’ satisfaction with MySpace’s privacy
19 settings, concluding that users typically preferred Facebook’s settings over Myspace’s privacy settings.

20 103. Despite claiming to provide users with enhanced privacy protections, however,
21 Facebook increasingly made user content and information available to advertisers, app developers and
22 others without disclosure to users. Facebook’s misleading of its users allowed it to continue to amass
23 market share in the Social Network Market.

24 104. Ultimately, having become the dominant player in the social networking area, Facebook
25 sought to identify potential threats to its dominance and remove them. As part of that strategy,
26 Facebook utilized third-party services to collect consumer data and identify potential threats, purchased
27 nascent competitors such as Instagram and WhatsApp to prevent them from growing into competing
28

1 social networks, and imposed anticompetitive conditions on access to its platform to evaluate and
 2 eliminate potential competitive threats.

3 **B. Facebook Misuses Consumer Data to Identify Competitive Threats.**

4 105. As noted previously, the Social Network Market is characterized by strong network
 5 effects: a provider's service is generally more valuable to a user when more of the user's friends and
 6 family are using that service. Once a personal social network has achieved dominant scale, these effects
 7 make competition and entry harder, even for a rival that users perceive as offering a higher quality
 8 product.

9 106. As a result, and as Facebook well understands, the most significant competitive threats
 10 to Facebook may come not from near clones of Facebook, but from differentiated products that offer
 11 users a distinctive way of interacting with friends and family for which Facebook is not optimized. As
 12 Zuckerberg explained in a February 2012 email: "Once someone wins at a specific mechanic, it's
 13 difficult for others to supplant them without doing something different."

14 107. Facebook's leadership also understands that Facebook's monopoly in the Social
 15 Network Market is most vulnerable at moments of disruption and transition, when a competitor may be
 16 better placed than Facebook to exploit changes in technology or consumer behavior. A crucial
 17 transition of this kind occurred from about 2010 to 2014 with the proliferation of smartphones, which
 18 transformed the way that users consumed digital services. Zuckerberg and other executives realized that
 19 Facebook offered a relatively poor experience for mobile users, and that this made Facebook's
 20 monopoly position more vulnerable than it had ever been.

21 108. Maintaining the monopoly in the Social Network Market was key to maintaining
 22 Facebook's monopoly in the Social Advertising Market. Were any of these potential threats to come to
 23 fruition, competitors would have the ability to amass the treasure trove of data that could threaten
 24 Facebook's dominant position over social advertising. Understanding these threats, Facebook made a
 25 point of attempting to detect and evaluate competitive threats early so as to neutralize them before they
 26 had a chance to mature.

27 109. One way that Facebook identified these threats was using consumer data. For example,
 28 in October 2013, Facebook acquired the user surveillance company Onavo for \$115 million. Onavo

1 marketed itself to users as providing secure virtual private networking services, but—unknown to many
2 users—it also tracked users’ online activity. Prior to acquiring Onavo, Facebook had relied on Onavo’s
3 surveillance of Facebook’s competitors for years, and Facebook ultimately acquired and used Onavo’s
4 assets to track potential competitors through non-public, internal, real-time data about its users’
5 engagement, usage, and time spent on other apps.

6 110. To obtain extensive information on a user’s usage of mobile applications and of
7 bandwidth, Onavo cloaked its spyware in VPNs, data compression, and even in mobile privacy apps.
8 Onavo sold the mobile usage data it collected to Facebook, which in turn used the real-time information
9 it received from Onavo to determine which mobile applications posed a threat to Facebook’s
10 dominance and to the substantial barriers to entry protecting Facebook from new entrants and
11 competition.

12 111. Facebook used Onavo’s data to: (a) identify and target competitors from which
13 Facebook could demand concessions; (b) identify and target competitors to whom Facebook would
14 completely deny access to its platform; and (c) identify and target competitors that Facebook would
15 remove from the competitive landscape entirely through acquisition.

16 112. After its purchase of Onavo, Facebook immediately began integrating Onavo’s
17 applications into both its business operations and its acquisition strategy. Facebook, for example,
18 began analyzing data secretly collected from Onavo’s Protect software, which was a massive
19 surveillance and data collection scheme disguised as VPN software. Billed as a way to “keep you and
20 your data safe,” Onavo Protect in fact monitored all web and mobile application traffic on a user’s
21 mobile device. When an Onavo Protect user opened a mobile app or website, Onavo software secretly
22 redirected the traffic to Facebook’s servers, where the action was logged in a massive database.
23 Facebook product teams then analyzed the aggregated Onavo data to determine which apps and
24 features people were using in real time, how frequently they used the apps, and for how long. If the
25 data in an app was not encrypted, this information was as specific as (for example) the number of
26 photos the average user likes or posts in a week in that app.

27 113. By acquiring Onavo, Facebook obtained control of data that it used to track the growth
28 and popularity of other apps, with an eye towards identifying competitive threats for acquisition or for

1 targeting under its platform policies. As a December 2013 internal Facebook slide deck noted: “With
2 our acquisition of Onavo, we now have insight into the most popular apps. We should use that to also
3 help us make strategic acquisitions.” Facebook also used Onavo data to generate internal “Early Bird”
4 reports for Facebook executives, which focused on “apps that are gaining prominence in the mobile
5 eco-system in a rate or manner which makes them stand out.”

6 114. Facebook’s use of Onavo came to light in August 2018 when Apple removed Onavo
7 from its app store following reporting that Facebook was using the app to track users and other apps.
8 Apple ejected Facebook’s Onavo app from its marketplace because it violated Apple’s rules prohibiting
9 apps from using data in ways far beyond what is required to run the app and provide advertising. In
10 other words, because Onavo Protect was leveraging far more data than any VPN could conceivably
11 need, it was clear that the true purpose of the app was to spy on Onavo users. Apple refused to allow
12 that. An Apple spokesperson said the company intended to make “it explicitly clear that apps should
13 not collect information about which other apps are installed on a user’s device for the purposes of
14 analytics or advertising/marketing and must make it clear what user data will be collected and how it
15 will be used.”

16 115. The amount of commercial surveillance that Onavo’s technology enabled was immense.
17 Facebook’s Onavo Protect app reported on users’ activities whether their screens were on or off;
18 whether they used WiFi or cellular data; and even when the VPN was turned off. There was no rational
19 relationship between the data collected and the purported purpose of the application. Put simply, a
20 VPN that collected data even when the VPN was off was an obvious subterfuge for spying on user
21 behavior.

22 116. Facebook tried to circumvent Apple’s ban by repackaging its Onavo spyware as a
23 Facebook Research VPN app. Facebook sidestepped the App Store by rewarding teenagers and adults
24 when they downloaded the Research app and gave it root—superuser—access to network traffic on
25 their mobile devices. Facebook has been leveraging its Onavo code in similar ways since at least 2016,
26 administering the program under the codename “Project Atlas”—a name suited to its goal of surveilling
27 app usage on mobile devices in real time.
28

117. When the news broke in January 2019 that Facebook’s Research apps were repackaged Onavo apps designed to spy on users, Facebook immediately withdrew the programs from the Apple App store. Apple again concluded that Facebook had tried to violate its policies by obtaining a level of administrative privileges on an iPhone or iPad that would have been designed for a company’s internal IT department.

118. In addition to Onavo’s Protect app, Facebook has attempted to deploy its surveillance software as other forms of utility applications that require extensive or privileged access to mobile devices. For example, Facebook released the Onavo Bolt app, which locked apps behind a passcode or fingerprint while it covertly surveilled users—and sent Facebook the results.

119. Facebook’s use of Onavo for these anticompetitive purposes continued into 2019 until it was shut down following public scrutiny.

C. Facebook Maintained Its Monopoly by Acquiring Burgeoning Competitive Threats.

120. Facebook developed a strategy to maintain its monopoly power in the Social Network Market and Social Advertising Market, not by competing on the merits, but rather through a course of anticompetitive conduct spanning years in which Facebook, among other practices, acquired niche competitors that had the potential to threaten its monopoly.

121. Two acquisitions highlight this approach:

- a. the acquisition and continued control of Instagram, and
- b. the acquisition and continued control of WhatsApp.

122. These acquisitions reflect a deeply rooted view within Facebook that, as Zuckerberg put it in a June 2008 internal email, “it is better to buy than compete.” This view recurs in Facebook’s internal documents. For example, Zuckerberg noted after the announcement of the Instagram acquisition that “we can likely always just buy any competitive startups.”

123. Consistent with this approach, Facebook has tried and failed to buy other companies that have drawn its competitive attention, including Twitter and Snapchat. For example, in lamenting that Twitter had “turned down [Facebook’s] offer” to be acquired in November 2008, Zuckerberg wrote: “I

1 was looking forward to the extra time that would have given us to get our product in order without
 2 having to worry about a competitor growing.” Some reports suggest that since its founding in 2004,
 3 Facebook has acquired at least 63 companies, transactions that have only recently been revealed as
 4 distinctly anticompetitive.

5 **1. The Instagram Acquisition Neutralized a Competitive Threat.**

6 124. Beginning around 2010, the widespread adoption of smartphones marked a significant
 7 change in the way that people consumed digital services, with people shifting from desktop computers
 8 to mobile devices. With respect to personal social networking services, because smartphones are
 9 portable and offer integrated digital cameras, social networking with family and friends through taking,
 10 sharing, and commenting on photographs via a mobile app optimized for that activity became
 11 increasingly popular.

12 125. But Facebook was struggling to provide a strong user experience for this kind of
 13 personal social networking activity. It was built and optimized for desktop use, not smartphones, and its
 14 performance for working with and sharing photos on mobile devices was weak. Facebook feared that
 15 its personal social networking monopoly would be toppled by a mobile-first, photo-based competitor
 16 emerging and gaining traction.

17 126. It soon became clear that Instagram was such a competitor. Following its launch in
 18 October 2010 for iOS devices, Instagram quickly gained popularity for users seeking a product that
 19 facilitated photo-based social interactions with friends and family. Instagram’s growth was stellar. It
 20 gained 25,000 users on its first day; 100,000 users in a week; 1 million users in less than three months;
 21 and 10 million users in less than a year— all while available only on Apple’s iOS devices and before
 22 launching on Android devices.

23 127. Facebook watched Instagram’s emergence with mounting anxiety. In February 2011,
 24 Zuckerberg wrote to colleagues: “In 4 months they’re up to 2m users and 300k daily photo uploads.
 25 That’s a lot. We need to track this closely.”

26 128. Facebook initially tried to compete on the merits with mobile photo-sharing capabilities,
 27 dedicating significant resources to developing its own camera app, code-named “Snap.” But despite
 28 relentless pressure from senior management, these efforts met with limited success. In July 2011, one

1 executive demanded: “[W]hy is mobile photos app development moving so slowly? We still are getting
 2 our ass kicked by Instagram.” And by September 2011, Zuckerberg noted: “In the time it has taken us
 3 to get ou[r] act together on this[,] Instagram has become a large and viable competitor to us on mobile
 4 photos, which will increasingly be the future of photos.”

5 129. The concern was not just that Instagram had a better photo-sharing platform but that it
 6 could use its gains as leverage to create a competing social network. In that same September 2011
 7 email, Zuckerberg warned that Instagram was a major threat: “. . . I view this as a big strategic risk for
 8 us if we don’t completely own the photos space. If Instagram continues to kick ass on mobile or if
 9 Google buys them, then over the next few years they could easily add pieces of their service that copy
 10 what we’re doing now, and if they have a growing number of people’s photos then that’s a real issue
 11 for us . . . literally every couple of months that we waste translates to a double in their growth and a
 12 harder position for us to work our way out of.” Facebook employees scrambled to meet Zuckerberg’s
 13 demands. In an internal email dated September 13, 2011, Facebook’s Director of Engineering reminded
 14 her team: “Zuck is anxious for the [Facebook] snap app (mainly motivated by a desire to slow down
 15 Instagram’s growth).”

16 130. Facebook’s leadership feared not only an independent Instagram, but also an Instagram
 17 in the hands of another purchaser, such as Google (mentioned by Zuckerberg in the September 2011
 18 email above), Apple, or Twitter. In April 2012, a Facebook engineer warned Zuckerberg of “the
 19 potential for someone like Apple to use [Instagram] as a foothold.” And an investor in Instagram and
 20 former Facebook executive underscored the threat from Twitter: “if twitter and Instagram [sic] became
 21 one company it would make life more difficult for facebook.”

22 131. As Instagram soared, Facebook’s leaders began to focus on the prospect of acquiring
 23 Instagram rather than competing with it. For example, in January 2012, the head of Facebook’s internal
 24 M&A group wrote to Zuckerberg to suggest “m&a” as a solution to this problem, in order to increase
 25 users’ switching costs, retain engagement, and lock them into Facebook:

26 [I] think photos in general and certainly in conjunction with mobile is a weak spot
 27 for us, yet represents a large part of many users['] engagement on fb. i view this
 28 as both a significant threat (google/picasa/android, instagram, etc.) and
 opportunity imo, photos (along with comprehensive/smart contacts and unified

1 messaging) is perhaps one of the most important ways we can make switching
 2 costs very high for users - if we are where all users' photos reside because the
 3 uploading [sic] (mobile and web), editing, organizing, and sharing features are best
 4 in class, will be very tough for a user to switch if they can't take those photos and
 associated data/comments with them. i think this area should be a priority for us
 organically and through m&a especially given competitive dynamics.

5 132. By February 2012, Zuckerberg predicted that an independent Instagram could soon
 6 achieve massive scale, and suggested that Facebook should move to acquire it:

7 *If [my analytical] framework holds true, then we should expect apps like*
 8 *Instagram to be able to grow quite large.* If it has 15m users now, it might be able
 9 to reach 100-200m in the next 1-2 years. (Intuitively this is not crazy because in
 10 the next year alone iOS should double and it should spread to Android, so even
 11 without further increase in market share it should grow by at least 4x this year.) If
 those assumptions hold true, then *we should perhaps be more open to buying these*
companies than we currently seem to be. (Emphasis added).

12 133. Throughout this period, Zuckerberg explained the case for acquisition in terms of
 13 Instagram's threat not as a niche competitor but competitor in the Social Network Market. In one email,
 14 he noted:

15 One business questions [sic] I've been thinking about recently is how much we
 16 should be willing to pay to acquire *mobile app companies like Instagram and Path*
 17 *that are building networks that are competitive with our own.* These companies
 18 have the properties where they have millions of users (up to about 20m at the
 19 moment for Instagram), fast growth, a small team (10-25 employees) and no
 20 revenue. The businesses are nascent *but the networks are established, the brands*
 21 *are already meaningful and if they grow to a large scale they could be very*
 22 *disruptive to us.* These entrepreneurs don't want to sell (largely inspired [by] our
 success), but at a high enough price -- like \$500m or \$1b -- they'd have to consider
 it. Given that we think our own valuation is fairly aggressive right now and that
we're vulnerable in mobile, I'm curious if we should consider going after one or
 two of them. What do you think about this? (Emphasis added).

23 134. On April 9, 2012, Facebook announced that it had reached an agreement to acquire
 24 Instagram for \$1 billion, Facebook's most expensive acquisition as of that date. Facebook paid a
 25 premium for Instagram, reflecting the significant threat that Instagram posed to Facebook's monopoly.

26 135. Close observers of Facebook recognized that Facebook had neutralized a significant
 27 competitive threat by buying Instagram. For example, in an email dated April 12, 2012, a major
 28 Facebook shareholder and former Facebook executive wrote to Instagram co-founder Kevin System:

I have been prodding various FB folks, including Zuck, for at least 6 months to do this, do it quickly, and do it at any cost. From my perspective the risk of not buying you guys (and someone like Google snapping you up) was beginning to make me, and a lot of other major shareholders, extremely uncomfortable [I]n the last few years [Facebook] allowed [its] core photos product (and its mobile offering) to languish. As a result the photos product never realized its ultimate potential, and worse, it ran the risk of the unthinkable happening - being eclipsed by another network with a “parallel graph”. As you know, photos is the lifeblood of Facebook, propping up the whole network through the usage, interaction, and positive feedback loops it generates, and time on site is directly linked to photo browsing. Going back to 2005, shortly after I launched photos it was generating ~50% of all Facebook page views, a stat which remained fairly steady until the introduction of games on platform.

136. Facebook’s acquisition of Instagram neutralized a singularly threatening personal social networking competitor and an increasingly serious threat to Facebook’s monopoly. An investor slide deck dated May 31, 2011, underscored Instagram’s founders’ plan “to develop a complete social networking service.” Systrom emphasized the breadth of this vision to Zuckerberg in private correspondence shortly before the acquisition:

[My vision for Instagram] means not limiting the scope of Instagram to just photos but to explore other mediums as well which support the original vision of Burbn [Instagram’s original name] being to improve the way we communicate and share in the real world. Is it a next-generation photos app or is it a next-generation communication app? I don’t mean to get overly philosophical, but the limits of our ambitions have really yet to be tested, and I want to see that through at least for now. The desire to have an effect at the scale of FB is real and tangible, and one that is actually quite hard to balance in our minds.

137. Instagram also planned and expected to be an important advertising competitor. An investor slide deck dated May 31, 2011, records Instagram’s plan to earn revenues through mobile advertising. Likewise, in a January 2012 email, Mr. Systrom explained to an external partner: “[W]e believe in the long run brands will pay to either be featured, have their content featured, or run targeted ‘instagrams’ to people as advertisements. Right now we raised enough money that we can work on building a product people love before going to try to sell to advertisers. We want an audience first[.]”

2. The WhatsApp Acquisition Neutralized a Competitive Threat.

138. Beginning around 2010, as another consequence of the increased popularity of smartphones, consumers began using mobile messaging services to communicate with one another. Mobile messaging includes (1) text messaging via short-message-service or multimedia- message-service protocols (“SMS”), and (2) text messaging via internet-based, over-the-top mobile messaging apps (“OTT mobile messaging services”). Traditionally, OTT mobile messaging services have not charged a per-message fee, and have provided improvements over SMS, like enhanced features for sharing content (e.g., photos, videos, sound clips, and GIFs) and the option to create persistent groups of users. Since 2011, when the messaging volume of SMS peaked, the messaging volume of OTT messaging services has grown astronomically.

139. Facebook’s leadership soon realized that the explosion of OTT mobile messaging services presented a significant competitive threat to Facebook’s monopoly in the Social Network Market and consequently its monopoly in the Social Advertising Market. In particular, they realized that a mobile messaging app that reached sufficient scale could, by adding additional features and functionalities, enter the personal social networking market at competitive scale and undermine or displace Facebook’s personal social networking monopoly.

140. Facebook’s leadership feared that mobile messaging would serve as a path for a serious competitive threat to enter the Social Network Market. For example, in an April 2012 email, a Facebook data scientist noted: “[W]hile these [mobile messaging] apps began as alternatives to SMS, they are increasingly expanding into domains that more closely resemble traditional social-networking services.” A couple of weeks later, he wrote again to colleagues: “We’re continuing to focus on mobile messenger apps. Two takeaways: several of these apps are trying to expand into more full-fledged social networking; and a number are working on international expansion but with varying degrees of success.” Likewise, in an August 2013 email, the head of Facebook’s internal M&A group warned that “the scary part, of course, is that this kind of mobile messaging is a wedge into broader social activity / sharing on mobile we have historically led in web.”

141. Facebook executives and employees saw mobile messaging as a serious strategic threat. For example, in an email dated October 4, 2012, Facebook’s Director of Product Management wrote to

colleagues on the subject of competition from mobile messaging services: “[T]his is the biggest threat to our product that I’ve ever seen in my 5 years here at Facebook; it’s bigger than G+, and we’re all terrified. These guys actually have a credible strategy: start with the most intimate social graph (I.e. [sic] the ones you message on mobile), and build from there.”

142. Similarly, notes included with a February 2013 Facebook board presentation titled “Mobile Messaging” warned that mobile messaging services were “a threat to our core businesses: both [with respect to] graph and content sharing. [T]hey are building gaming platforms, profiles, and news feeds. [T]hese competitors have all the ingredients for building a mobile-first social network. At its current rate, WhatsApp will be near SMS levels of messaging in 1 year[.]”

143. Zuckerberg also recognized the strategic value of mobile messaging services as popular and important services in their own right. For example, in April 2012, he wrote: “I actually think that messaging is the single most important app on anyone’s phone. It may not be the biggest business, but it is almost certainly by far the most used app, and therefore it’s a critical strategic point for us.” He continued: “Since we bought Instagram (and extended the close date!), I now feel like we’re ahead in photos but falling increasingly behind in messages.”

144. Facebook’s fears soon focused on WhatsApp, the leading OTT mobile messaging services provider and a significant competitive threat to Facebook’s monopoly. Launched in November 2009, WhatsApp’s distinctively strong user experience and top-grade privacy protection had fueled stellar growth. By February 2014, WhatsApp had approximately 450 million monthly active users worldwide and was gaining users at a rate of one million per day, placing it “on a path to connect 1 billion people.”

145. Unlike other mobile messaging apps that had built a large user base in parts of Asia but had not made inroads in the West, WhatsApp had not only achieved vast scale in Asia and Europe but was also building share in the United States. Unlike Apple’s iMessage app, which is confined to the iOS operating system on Apple devices, WhatsApp was available on all the major smartphone operating systems, positioning it as a credible threat to achieve significant cross-platform scale. And unlike traditional SMS, WhatsApp offered a rich content-sharing ability akin to a social network and

1 increased encryption for privacy-conscious users. As a result, WhatsApp threatened a move or spin-off
2 into the Social Network Market.

3 146. Facebook launched Facebook Messenger, an app that offered OTT mobile messaging
4 services, in the fall of 2011, in a direct effort to prevent WhatsApp from gaining scale. On the date of
5 its global launch, the product director of Facebook Messenger wrote to his team that: “We have a great
6 shot of competing with Whatsapp on being the app for serious mobile messaging users worldwide. . . .
7 Whatsapp has 15 million (registered?) users. Let’s see how quickly can we get to 10 million daily
8 actives.”

9 147. But Facebook soon realized that it was far behind WhatsApp. To improve its
10 performance and usage, Facebook would have had to spend considerable resources to catch up. As
11 Zuckerberg put it in April 2012:

12 [R]ight now, aside from Facebook integration, WhatsApp is legitimately a better
13 product for mobile messaging than even our standalone Messenger app. It’s more
14 reliable and faster for sending messages. You get better signal and feedback via
15 read receipts and last seen times. You can even reach most people easily via the
16 contacts integration. [W]hatsapp sends more mobile messages per day than we do
17 by more than 2x, and they’re growing about 3x faster week-over-week. This is a
18 big deal. . . . [U]nfortunately for us, I don’t think there’s any way to directly
minimize the advantage which is their momentum and growth rate. Their growth
comes from the product and network they’ve built, so the best things that we can
do is build out our product and network as well and as quickly as we can.

19 148. Facebook executives saw clearly that WhatsApp credibly threatened to increase its scale
20 in mobile messaging in the United States as it had already done in Europe and elsewhere. One
21 executive wrote to Zuckerberg on August 8, 2013: “[I] am really worried these guys [WhatsApp] are
22 the real deal!” He continued: “With the window of opportunity to solve the messaging situation
23 shrinking there are a couple of things we might want to add to messenger 3.0 I will run it by you
24 offline briefly to get your thoughts / see if we should double down now (it might be now or never given
25 how fast these guys keep growing / the ambitions they are signaling)[.]” Zuckerberg responded: “[I]f
26 they build substantive features beyond just making SMS free, that could be enough for them to tip
27 markets like the US where SMS is still the primarily [sic] platform.”
28

149. Facebook executives and employees repeatedly identified WhatsApp internally as a unique threat to Facebook that it would not be able to forestall through competition via Facebook Messenger. For example:

- a. In May 2013, a Facebook director of product growth commented of WhatsApp's CEO, Jan Koum, that he is "our biggest competitor/threat today[.]"
- b. In July 2013, a director of engineering wrote: "If we don't build the thing that kills Facebook, someone else will," and that's WhatsApp (see below). I personally think companies like WhatsApp are Facebook's biggest threat . . . [.]"
- c. In August 2013, the Vice President of Growth noted: "We are definitely not playing in the same field as whatsapp does [W]e might be already too late as of today for a 'start from scratch strategy' [.]"
- d. In September 2013, the Vice President of Growth wrote further that if WhatsApp became a platform "in a way that makes the user experience better / fuels growth - we are f.ed / this cements them as leader[.]"

150. Facebook feared not only what WhatsApp would do independently; it also feared what WhatsApp would do in the hands of another purchaser. As Facebook's Vice President of Growth wrote in October 2012, the "[b]iggest problem would be if it lands in the wrong hands...[.]" Facebook particularly feared an acquisition of WhatsApp by Google. As a manager of engineering and co-founder of a messaging app that Facebook acquired in 2011 warned colleagues in October 2012: "[T]he case for Google acquiring WhatsApp has only gotten stronger in the past 6 months. [I]f [WhatsApp] is acquirable at all, the risks of us not being the acquirer have grown." Facebook's Vice President of Growth agreed: "[T]hat is definitely what I would do if I was them...[.]"

151. As with Instagram, Facebook decided to acquire WhatsApp rather than compete with it, in an effort to neutralize a significant competitive threat to its monopoly in the Social Network Market. In April 2012, Zuckerberg wrote: "[I]'m the most worried about messaging. WhatsApp is already ahead of us in messaging in the same way Instagram was 'ahead' of us in photos." He added: "I'd pay \$1b for them if we could get them."

152. Facebook first reached out to WhatsApp about a potential acquisition in November 2012; and it reached out again in February 2014, this time with more success. On February 19, 2014,

Facebook announced an agreement to buy WhatsApp for \$19 billion. This valuation reflected the seriousness of the threat that WhatsApp posed to Facebook's personal social networking monopoly.

153. For the second time in two years, Facebook employees celebrated the neutralization of a competitive threat. In an instant message dated February 19, 2014, a Facebook manager noted approvingly: "[W]orth it. Their numbers are through the roof, everyone uses them, especially abroad it [sic]. Prevents probably the only company which could have grown into the next FB purely on mobile[.] . . . [1]0% of our market cap is worth that[.]" (Emphasis added).

154. A few days later, a Facebook executive wrote to colleagues summarizing the WhatsApp acquisition as a "land grab"—a significant response to a limited period of competitive vulnerability, rather than a move Facebook would have to repeat regularly in the future:

A big concern expressed is that we are going to spend 5-10% of our market cap every couple years to shore up our position. I like David's answer that we think this is a "point in time" where change is coming to the mobile landscape. I hate the word "land grab" but I think that is the best convincing argument and we should own that.

155. Outside Facebook, industry analysts also understood that the WhatsApp acquisition had neutralized a significant competitive threat to Facebook. The investment bank SunTrust Robinson Humphrey laid out the case for the deal with remarkable clarity:

[W]e feel it is easy to see why WhatsApp was more than just a "messaging" threat. Much like how the acquisition of Instagram by Facebook was both an offensive and defensive move, we think this acquisition not only expands the company's [total addressable market] and capabilities but also covers it's [sic] flank from the fast growing "messaging companies". At first glance, one may assume that WhatsApp is "merely a texting app". However WhatsApp is much more, sharing 600m photos, 100m videos, 200m voice messages, and 19B messages per day. Moreover, users can also share locations, places, and communicate 1-to-1 or 1-to-many. Given this functionality by WhatsApp and the focus of Facebook on communication and linking the world's population, we think WhatsApp and Facebook were likely to more closely resemble each other over time, potentially creating noteworthy competition, which can now be avoided.

156. By acquiring WhatsApp, Facebook suppressed the competitive threat that WhatsApp posed to Facebook’s monopoly in both the Social Network Market and Social Advertising Market. Facebook was able to keep WhatsApp cabined to providing mobile messaging services rather than allowing WhatsApp to become a competing personal social networking provider, and Facebook has limited the promotion of WhatsApp in the United States.

D. Facebook Limited Access to Its Platform to Deter Competition and Maintain Its Monopoly.

157. In addition to its strategy of acquiring competitive threats to its monopoly in the Social Network Market (and Social Advertising Market), Facebook has, over many years, announced and enforced anticompetitive conditions on access to its valuable platform interconnections, such as the application programming interfaces (“APIs”) that it makes available to third-party software applications. These anticompetitive conditions on APIs—punishing and suppressing some promising threats (e.g., Path, Circle, and various messaging apps) and preventing and deterring others from even becoming threats in the first place—continued until recently suspended in the glare of attention from governments and regulators around the globe.

158. Facebook launched “Facebook Platform” in 2007 with the goal of becoming the infrastructure for social interactions on the internet. Facebook Platform encouraged software developers to build an entire ecosystem of apps and tools—ranging from games and page-design tools to video-sharing tools and e-marketing apps—that interoperate with Facebook, with the aim of turning Facebook into a dominant platform for apps. As Zuckerberg put it in June 2009, the “platform strategy” was an effort to “enable us to be the de facto open graph/identity database that everyone uses in all their applications.”

159. Since its launch, Facebook Platform has undergone a variety of adjustments and added functionalities, such as APIs that allowed third-party apps access to Facebook user data. In 2010, Facebook provided third-party apps with access to critical APIs, including the Find Friends API and other APIs used to access user content from Facebook. The Find Friends API, in particular, was a valuable growth tool for third-party apps because it enabled users of such apps to find their Facebook friends who also used the third-party app and to invite those friends who did not.

1 160. Also in 2010, Facebook added the Open Graph API to Facebook Platform, which
 2 enabled third-party apps and websites to add plug-ins, such as the Facebook “Like” button, to their own
 3 services. Using the Like button, Facebook users could like and share their interest in the third-party
 4 app. Third-party apps were motivated to install the Like button and encourage its use, as a “Like”
 5 would be shared on the user’s news feed and profile on Facebook, which could attract additional users
 6 to the third-party app.

7 161. Usage of Open Graph grew rapidly. One week after the introduction of Open Graph,
 8 over 50,000 websites had installed Open Graph plug-ins. Those sites realized the immediate benefits of
 9 a massive new distribution channel. By July 2012, Open Graph was being used to share nearly one
 10 billion pieces of social data each day to Facebook, giving Facebook substantially greater and richer
 11 information about its users and their online activities.

12 162. This strategy not only integrated users’ online lives and activities more fully into
 13 Facebook; it also drove profits for Facebook. As a Facebook executive summarized it in a May 2012
 14 email to Facebook COO Sheryl Sandberg: “Because we have this critical mass of people, that attracts
 15 new people to sign up, it attracts developers who want to find customers for their apps and websites,
 16 and it attracts advertisers [who] want to reach the audience” and Facebook had “[r]eached a size now
 17 where you can imagine as a developer that most of your current and future users/customers are on
 18 Facebook[,]” noting that “[7] of the top 10 apps in the Apple App store are Facebook enabled[.]”

19 163. Further, third-party apps helped Facebook grow and provided other forms of value to
 20 Facebook, such as by promoting Facebook around the internet via the Facebook plug-ins and by
 21 directing social data, such as “Likes,” back to Facebook. Since launching its Facebook Platform and
 22 Open Graph initiatives, Facebook has grown significantly, adding at least 150 million monthly users
 23 each year to reach its current 2.7 billion monthly users worldwide.

24 164. With the success of Facebook Platform, Facebook became important infrastructure for
 25 third-party apps and obtained immense power over apps’ developmental trajectories, competitive
 26 decision-making, and investment strategies.

27 165. Facebook used and continues to use this power to deter and suppress competitive threats
 28 to its monopoly in the Social Network Market and Social Advertising Market. In particular, to protect

its monopoly, Facebook adopted conditional dealing policies that limited how third-party apps could use Facebook Platform. Specifically, between 2011 and 2018, Facebook made Facebook Platform, including certain commercially significant APIs, available to developers only on the condition that their apps neither competed with Facebook (including, at relevant times, by “replicating core functionality” of Facebook or Facebook Messenger), nor promoted competitors.

166. Facebook punished apps that violated these conditions by cutting off their use of commercially significant APIs, hindering their ability to develop into stronger competitive threats to Facebook.

167. These actions, individually and in the aggregate, have suppressed the ability and incentive of apps in the Facebook ecosystem to become competitive threats to Facebook—and its personal social networking monopoly—in at least two ways. First, the public announcement and enforcement of the policies changed the incentives of software developers, deterring them from developing features and functionalities that would present a competitive threat to Facebook, or from working with other platforms that compete with Facebook. Second, enforcement of the policies—i.e., the actual termination of API access for competitive threats that attracted Facebook’s attention—hindered the ability of individual businesses to threaten Facebook’s personal social networking monopoly.

1. Facebook’s Anticompetitive Conditions on Platform Access Required Developers Not to Work with Competitors.

168. From July 2011 until December 2018, Facebook publicly announced and imposed a set of anticompetitive conditions governing access to Facebook Platform.

169. On July 27, 2011, Facebook introduced a new policy that “Apps on Facebook may not integrate, link to, promote, distribute, or redirect to any app on any other competing social platform.” This policy was intended to harm the prospects for—and deter the emergence of— competition, including personal social networking competitors. The immediate impetus for the policy was Google’s launch of the Google+ personal social network. In a July 27, 2011, email, a Facebook manager explained: “[W]e debated this one a lot. In the absence of knowing what and how google was going to launch, it was hard to get very specific, so we tended towards something broad with the option to

1 tighten up as approach and magnitude of the threat became clear.” Later that day, another Facebook
 2 employee protested the anticompetitive move to colleagues: “I think its [sic] both anti user and sends a
 3 message to the world (and probably more importantly to our employees) that we’re scared that we can’t
 4 compete on our own merits.”

5 170. Following that, Facebook imposed several other policies restricting app developers’ use
 6 of Facebook Platform, including Facebook APIs. Through these policies, Facebook used its control
 7 over APIs to deter and suppress competition.

8 171. **September 2012: no exporting data to competitor social networks:** On September 12,
 9 2012, Facebook introduced a new policy: “Competing social networks: You [developers] may not use
 10 Facebook Platform to export user data into a competing social network without our permission[.]”

11 172. **January 2013: no promotion / data export to any app that “replicates a core**
 12 **Facebook product or service.”** On January 25, 2013, Facebook added a new condition to prevent
 13 developers from “replicating core functionality” (i.e., competing with Facebook), or assisting others
 14 who might do so:

15 Reciprocity and Replicating core functionality: (a) Reciprocity: Facebook
 16 Platform enables developers to build personalized, social experiences via the
 17 Graph API and related APIs. If you use any Facebook APIs to build personalized
 18 or social experiences, you must also enable people to easily share their experiences
 19 back with people on Facebook. (b) Replicating core functionality: You may not
 20 use Facebook Platform to promote, or to export user data to, a product or service
 21 that replicates a core Facebook product or service without our permission.
 22 (Emphasis added.)

23 173. Facebook continued to evaluate further restrictions that would target competitors. Again,
 24 the proposal to further restrict competitors’ access to Facebook Platform fueled internal dissent, as well
 25 as repeated explicit recognition of the importance of API access to the growth and success of apps and
 26 businesses in the Facebook Platform ecosystem. In an email from December 2013, a Facebook software
 27 engineer wrote:

28 [S]o we are literally going to group apps into buckets based on how scared we are
 of them and give them different APIs? How do we ever hope to document this?
 Put a link at the top of the page that says “Going to be building a messenger app?”

Click here to filter out the APIs we won't let you use!" And what if an app adds a feature that moves them from 2 to 1? Shit just breaks? And a messaging app can't use Facebook login? So the message is, "if you're going to compete with us at all, make sure you don't integrate with us at all."? I am just dumbfounded.

174. Facebook's Head of Developer Products responded, noting that Facebook already targeted competitors for access restrictions: "[Y]eah, not great, but this already happens to some degree - e.g. Path isn't allowed to use certain things. [T]he absolute numbers in terms of who is considered a competitor are pretty small." Another Facebook engineer agreed: "[m]ore than complicated, it's sort of unethical[.]" while an engineering manager noted: "[w]ell, I agree it is bad[.]" The Head of Developer Products replied: "[S]o, I agree this sucks but you are reading this too absolutely. . . . [R]ealistically only the top 5 messaging apps will ever raise an eyebrow." But the software developer was unsatisfied: "[T]hat feels unethical somehow, but I'm having difficulty explaining how. It just makes me feel like a bad person." The Head of Developer Products replied: "[T]his is kind a [sic] political safety net internally that allows Platform to escape-hatch situations that the rest of the company isn't happy about."

175. **May 2014: Platform 3.0 launches.** A new approach—dubbed Platform 3.0—launched on May 2, 2014. At that time, Facebook terminated all apps' access to certain APIs, which included restricting third-party apps from accessing information about their users' friends who were not already using that third-party app.

176. An internal Facebook slide deck from August 21, 2014, summed up the fear of competition that motivated Facebook to restrict access to its Facebook Platform ecosystem: "Concern: App may use Facebook for growth, switch functionality to become [a] direct competitor[.]"

177. Because access to the relevant APIs is valuable to app developers, Facebook policy conditions changed the incentives of app developers, and deterred them from developing competing functionalities or supporting competing social networks.

178. Moreover, Facebook knew and expected that API access was sufficiently important to affect the incentives of developers and the developmental trajectories of their apps. Developers were incentivized to make decisions that would not jeopardize their access to Facebook's APIs. An internal Facebook slide deck dated January 2014 dealing with Facebook Platform policies directly

acknowledged the importance of API access, asking whether Facebook was “[c]omfortable altering / killing prospects of many startups[.]”

2. Facebook’s Enforcement of its Anticompetitive Conditions Deterred Emerging Threats.

179. Facebook’s actions to enforce these policies by cutting off API access were generally directed against apps in three groups.

180. *First*, Facebook targeted promising apps that provided personal social networking.

181. For example, Facebook took actions against a personal social networking competitor, Path, which was founded by a former Facebook manager. In or around April 2013, Facebook terminated Path’s access to Facebook’s APIs, and Path’s growth then slowed significantly.

182. *Second*, Facebook targeted promising apps with some social functionality.

183. For example, Circle was an app that was attempting to build a local social network that came to Facebook’s attention in December 2013. In proposing to cut off Circle’s API access, a Facebook manager emphasized Circle’s competitive promise: “Circle positions itself as the ‘local social network’ and has seen some strong growth over the last four days (+800K downloads yesterday, +600K FB logins yesterday, #1 in the App Store in the UK).” While Facebook claimed externally that the termination was because Circle had “spammed” users, internal correspondence after Circle had resolved the spam problems revealed the real reason was because Circle posed a threat: “They are duplicating the [social] graph - and doing a rather excellent job if [sic] it. They are also very directly creating a competing social network on top of that graph.” Indeed, Facebook continued to withhold access to its APIs after Circle remedied concerns that Facebook had flagged, with a Facebook manager stating: “While I appreciate that Circle has done all of the items below (or agrees to do them), we ultimately still have the replicating core functionality piece, which can’t be ‘fixed’.” Over the following weeks, Circle’s daily new users dropped from six hundred thousand per day to nearly zero.

184. Similarly, in January 2013, Facebook’s Director of Platform Partnerships and Operations wrote to colleagues: “[T]witter launched Vine today which lets you shoot multiple short video segments to make one single, 6-second video. As part of their NUX [new user experience], you

1 can find friends via FB. Unless anyone raises objections, we will shut down their friends API access
 2 today. [W]e've prepared reactive PR, and I will let Jana know our decision." Zuckerberg replied:
 3 "[Y]up, go for it." By cutting off Vine, Facebook prevented it from accessing APIs that would have
 4 helped it grow.

5 185. **Third**, Facebook targeted promising apps that offered mobile messaging services, that
 6 were existing competitors of Facebook Messenger, and that ultimately threatened to develop into
 7 competitive threats to Facebook. Throughout 2013, Facebook blocked mobile messaging apps from
 8 using commercially significant APIs. For example, in August 2013, Facebook restricted a number of
 9 messaging apps simultaneously, with the Head of Developer Enforcement directing colleagues to
 10 restrict them from "accessing any read APIs beyond basic info[,]” instructing that “we will not be
 11 communicating with the [developers] in any way about these restrictions.”

12 186. Thus, Facebook's enforcement of conditional platform policies hindered the ability of
 13 individual businesses to grow and threaten Facebook's monopoly in the Social Network Market and
 14 Social Advertising Market.

15 187. Facebook's enforcement actions also alerted other apps that they would lose access to
 16 Facebook's APIs if they, too, posed a threat to Facebook's monopoly. For instance, one third-party app
 17 contacted Facebook about its platform practices soon after Facebook cut off Vine. A Facebook manager
 18 reported internally about the third-party app: “They're super concerned about the viability of relying on
 19 our platform moving forward when there's this lingering chance that we can shut them down under
 20 grounds like this.”

21 188. Collectively, Facebook's announcements and enforcement of its anticompetitive
 22 conditions have served to hinder, suppress, and deter the emergence of promising competitive threats to
 23 its U.S. personal social networking monopoly. Accordingly, this conduct has contributed to the
 24 maintenance of Facebook's U.S. personal social networking monopoly.

25 189. Facebook cannot substantiate procompetitive benefits sufficient to justify the
 26 anticompetitive conditioning of access to Facebook Platform.
 27
 28

1 **E. Facebook’s Misconduct Becomes Public.**

2 190. Issues related to Facebook’s lax privacy practices came to the forefront in March of
3 2018 with the Cambridge Analytica scandal. Cambridge Analytica (“Cambridge”) was a British
4 political consulting firm that combined data harvesting and analytics for use in political advertising.
5 The app consisted of a series of questions that were used to build a psychological profile on users. The
6 app harvested data not only from the app users’ own apps, but also from the users’ Facebook friends.

7 191. Cambridge’s practices were uncovered in March 2018, when it was revealed that, based
8 on the 270,000 Facebook users who used a Cambridge app called “This Is Your Digital Life,”
9 Cambridge was able to access the personal data of up to 87 million Facebook users. The vast majority
10 of these users had not given Cambridge permission to access their data.

11 192. After the scandal broke, Facebook banned the app and claimed that Cambridge had
12 breached Facebook’s terms of service. However, an investigation revealed that, as early as April 2015,
13 Facebook recognized that it was unable to keep track of how many app developers were using
14 previously downloaded data. And Facebook’s data permissions allowed apps to access data not only
15 about an app user, but about all of the app user’s friends. In fact, from 2010 until at least 2018,
16 Facebook allowed third parties to access the data of users’ friends. This misuse of data led to a
17 complaint brought by the Department of Justice in 2019. In its 2019 complaint against Facebook, the
18 DOJ cautioned that “[t]he full scale of unauthorized collection, use, and disclosure of consumer
19 information resulting from Facebook’s conduct is unknown due, at least in part, to the company’s lack
20 of recordkeeping.”

21 193. The Cambridge Analytica scandal also led to an investigation by the British
22 Government.

23 194. On December 4, 2018, Facebook removed the “core functionality” restrictions in its
24 API. The following day, on December 5, 2018, a member of the British Parliament published a cache
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of documents received as part of the Cambridge Analytical investigation. Those documents highlighted, for the first time, Facebook's anticompetitive conduct towards app developers.¹⁸

VII. HARM TO COMPETITION

195. Through the conduct described above, Facebook has hindered, suppressed, and deterred the emergence and growth of rival personal social networking providers, and unlawfully maintained its monopoly in Social Network Market in the United States.

196. The conduct described above harmed, and continues to harm, competition by limiting and suppressing competition that Facebook otherwise would have to face in the provision of personal social networking. As a result, users of personal social networking in the United States have been deprived of the benefits of additional competition for personal social networking.

197. The benefits to users of additional competition include some or all of the following: additional innovation (such as the development and introduction of new attractive features, functionalities, and business models to attract and retain users); quality improvements (such as improved features, functionalities, integrity measures, and user experiences to attract and retain users); and/or consumer choice (such as enabling users to select a personal social networking provider that more closely suits their preferences, including, but not limited to, preferences regarding the amount and nature of advertising, and the availability, quality, and variety of data protection privacy options for users, including, but not limited to, options regarding data gathering and data usage practices).

198. In addition, by monopolizing the U.S. Social Network Market, Facebook has maintained its stranglehold on access to the type of personal social data necessary to effectively compete in the provision of social advertising in the Social Advertising Market. Therefore, Facebook has harmed, and continues to harm, competition in the Social Advertising Market in the United States.

¹⁸ Emily Stewart, *5 takeaways from the UK's Facebook document dump: One item: It looks like Facebook discussed ways to use user data access as leverage with other companies*, available at <https://www.vox.com/business-and-finance/2018/12/6/18127980/facebook-uk-documents-emails-mark-zuckerberg> (last accessed December 30, 2020).

199. Competing personal social networking providers would have been close competitors of Facebook in the supply of social advertising. This is because they would have been able to offer the distinctive advertising features described herein that distinguish social advertising from other forms of display advertising, search advertising, and “offline” advertising. Instagram and WhatsApp, for example, were each well-situated to develop into meaningful competitive constraints on Facebook in the sale of advertising. Instagram’s founders explicitly planned to develop advertising offerings to monetize the Instagram personal social network. And an independent WhatsApp that developed a personal social networking offering would have had incentives to monetize it by offering advertising. Competing social networks may also have explored and developed alternative advertising models that advertisers would have preferred had it not been for the anticompetitive restrictions put in place by Facebook.

200. Facebook’s anticompetitive conduct, which allowed it to maintain its monopoly in the Social Advertising Market, has harmed competition. It has allowed Facebook to raise prices for social advertising and charge purchasers of advertisements in the Social Advertising Market supra-competitive prices.

201. Plaintiff Layser, along with others in the proposed Class were, and are, harmed in their business and property by being overcharged for advertising as a result of unlawful, anticompetitive conduct by Facebook.

202. Facebook cannot establish business justifications or procompetitive benefits in any relevant market to justify its unlawful and anticompetitive conduct to maintain its monopoly in the Social Network Market or the Social Advertising Market.

VIII. CLASS ACTION ALLEGATIONS

203. Plaintiff brings this action on behalf of itself and all others similarly situated pursuant to Federal Rules of Civil Procedure 23(a), 23(b)(2), and 23(b)(3) seeking damages and injunctive relief pursuant to federal antitrust law for the following class:

All persons and/or entities who purchased advertising directly from the Defendant in the United States during the Class Period.

Specifically excluded from the Class are the Defendant, its subsidiaries, parents, affiliates, joint ventures, and employees; federal governmental entities and instrumentalities; states and their subdivisions, agencies, and instrumentalities; and any judge(s) or jurors assigned to this case.

204. The Class Period is from October 1, 2012 until the effects of Defendant's anticompetitive conduct ends ("Class Period").

205. Plaintiff is a direct purchaser of advertising from Facebook.

206. **Numerosity**: Plaintiff does not know the exact number of class members because such information is presently in the exclusive control of Defendant. Plaintiff believes that due to the nature of the trade and commerce involved, there are thousands of class members geographically disbursed throughout the United States and that joinder of all class members is impracticable.

207. **Typicality**: Plaintiff's claims are typical of the claims of the members of the Class because Plaintiff, like all Class members, purchased advertising directly from the Defendant. Plaintiff's claims arise from the same common course of conduct giving rise to the claims of the Class and the relief sought is common to the Class.

208. **Common Questions Predominate**: Common questions of law and fact predominate, including, but not limited to:

- a. Whether Defendant monopolized the Social Advertising Market;
- b. Whether Defendant, its employees or affiliates, intended to monopolize the Social Advertising Market;
- c. Whether Defendant attempted to monopolize the Social Advertising Market;
- d. Whether Defendant possessed monopoly or market power in the Social Advertising Market;
- e. Whether high switching costs and social data obtained by Defendant created a barrier to entry for the Social Advertising Market that protected Facebook's market dominance, reduced competition or entry in the Social Advertising Market, and/or increased prices for products in that market, including, but not limited to, advertising sold to members of the proposed Class;

- f. Whether Defendant's decision to withdraw certain APIs lacked any justification and/or whether the procompetitive effects of the decision to do so, if any, was outweighed by the anticompetitive effects;
- g. Whether Defendant sacrificed short-term profits to monopolize, or attempt to monopolize, the Social Advertising Market;
- h. Whether the procompetitive effects, if any, of Defendant's decision to withdraw certain APIs could have been accomplished by less restrictive means;
- i. Whether Defendant's acquisition of certain nascent threats and potential rivals indicated a strategy to suppress competition in the Social Network Market;
- j. Whether Defendant's conduct harmed competition in the Social Advertising Market;
- k. Whether Defendant's conduct caused price increases for advertisements in the Social Advertising Market; and
- l. Whether Defendant's unlawful conduct was a substantial contributing factor in the injury to Plaintiff and members of the Class.

209. These and other questions of law or fact, which are common to the members of the Class, predominate over any questions affecting only individual members of the Class.

210. **Adequacy**: Plaintiff will fairly and adequately protect the interests of the Class. Plaintiff's interest is aligned with, and not antagonistic to, those of the other members of the Class who directly purchased advertising from the Defendant. Plaintiff has retained counsel competent and experienced in prosecuting class actions and antitrust litigation to represent it and the Class.

211. **Superiority**: A class action is superior to other available methods for the fair and efficient adjudication of this controversy since individual joinder of all damaged members of the Class is impractical. Prosecution as a class action will eliminate the possibility of duplicative litigation. Because the damages suffered by each individual Class member may be relatively smaller than the costs of litigation, the expense and burden of individual litigation would make it very difficult or impossible for individual Class members to redress the wrongs done to each of them individually, such that most or all Class members would have no rational economic interest in individually controlling the

prosecution of specific actions, and the burden imposed on the judicial system by individual litigation by even a small fraction of the Class would be enormous, making class adjudication the superior alternative. A class action presents far fewer case management difficulties than individual litigation and will provide the benefits of unitary adjudication, economy of scale, and comprehensive supervision by a single court.

212. Defendant has acted on grounds generally applicable to the Class, thereby making final injunctive relief appropriate with respect to the Class as a whole.

IX. FRAUDULENT CONCEALMENT AND TOLLING

213. Plaintiff could not have become aware of the anticompetitive acts alleged herein until December 5, 2018, when Facebook documents were made publicly available that revealed the anticompetitive intent behind Facebook's practices including its acquisition of nascent rivals as well as its anticompetitive API practices. During 2018, Facebook began to come under public scrutiny with the Cambridge Analytica scandal and the issues related to Apple's ban on Onavo. But not until documents were made publicly available in December of 2018 could Plaintiff have discovered, through the exercise of reasonable diligence, the existence of the anticompetitive nature of Facebook's actions alleged herein. For years prior to the release of the documents in December of 2018, Facebook had made affirmative misstatements to hide the unlawful acts described herein and the true anticompetitive motives behind some of these actions.

214. Nor could plaintiffs have discovered, through the exercise of reasonable diligence, the existence of certain of the anticompetitive acts alleged herein until, at the earliest, March 2018. As the House Antitrust Subcommittee recognized, "nuances in privacy terms are relegated to investigative journalists to discover and explain." The subsequent investigative reporting that brought to light Facebook's systematic deception and commercial surveillance was not made public until, at the earliest, March 17, 2018, during the Cambridge Analytica scandal. Accordingly, the statute of limitations should be equitably tolled to March 2018. All of the anticompetitive conduct described in this complaint presents timely claims, including Facebook's deception and acquisition conduct going back to before it achieved its social media monopoly.

215. In addition, Facebook's anticompetitive conduct was, by its nature, inherently self-concealing because it was performed outside the sight and knowledge of advertisers. As a result, Plaintiffs and Class members could not have discovered Facebook's scheme, even with the exercise of reasonable diligence.

216. Since the start of the Class Period, Facebook has committed continuing violations of the antitrust laws, resulting in monetary injury to Plaintiff and Class members. As described herein, Facebook has engaged in a pattern of independent misrepresentations to users and app developers, designed to acquire, maintain, and prolong Facebook's monopoly position. Similarly, Facebook has weaponized its users' data as a part of its acquisition strategy to eliminate emerging competitors. Each of these injurious acts was a separate and independent overt act during the limitations period that inflicted new and accumulating injuries upon advertisers in the Class.

X. INTERSTATE TRADE AND COMMERCE

217. Facebook's anticompetitive conduct has taken place in, and negatively affected the continuous flow of interstate trade and commerce in the United States in that, *inter alia*:

- a. Facebook has provided a social network and social media platform and has exchanged consumer information with advertisers throughout the United States;
- b. Facebook has sold advertisements to advertisers across the United States and pushed advertisements through to users in every state;
- c. Facebook has used instrumentalities of interstate commerce to provide social networking services and a social media platform to consumers and advertisers throughout the United States;
- d. In furtherance of the anticompetitive scheme alleged herein, Facebook has traveled between states and exchanged communications through interstate wire communications and via the United States mail; and
- e. The anticompetitive scheme alleged herein has affected billions of dollars of commerce in the United States.

218. Facebook has inflicted antitrust injury by artificially raising the price paid by Plaintiff and Class members for their social advertising.

XI. VIOLATIONS ALLEGED

COUNT I

VIOLATION OF SECTION 2 OF THE SHERMAN ACT (15 U.S.C. § 2)

MONOPOLIZATION

219. Plaintiff repeats and reiterates each of the allegations contained in the paragraphs above as if fully set forth herein.

220. Defendant has willfully acquired and maintained monopoly power in the Social Advertising Market.

221. Facebook possesses monopoly power in the Social Advertising Market.

222. Facebook has the power to control prices or exclude competition in the Social Advertising Market.

223. Facebook's revenue share of the Social Advertising Market is approximately 80%; its share has been above 70% since 2015.

224. Defendant has willfully acquired and maintained monopoly power for Facebook in the Social Advertising Market. As alleged herein, Defendant has accomplished this by means of predatory, exclusionary, and anticompetitive conduct, including but not limited to obtaining monopoly power by deceiving users about its privacy protection practices, secretly obtaining user data from third parties to identify and deter emerging competitive threats, engaging in covert surveillance of potential competitors' users to detect and ultimately acquire competitive threats before they became too formidable, neutralizing potential competitive threats by acquisition before they became an actual threat, and using its API as a means to exclude competition and prevent competitors from forming or growing.

225. Defendant's conduct alleged above has had an anticompetitive effect in the Social Advertising Market.

226. Defendant's conduct alleged herein has no legitimate business purpose or procompetitive effect.

227. Defendant's conduct has had a substantial effect on interstate commerce.

228. Plaintiff and Class members have been and will be injured in their business or property as a result of Defendant's conduct alleged herein.

229. Defendant's violation of 15 U.S.C. § 2 has caused injury to the Plaintiff and other Class members by forcing them to pay higher prices for social advertising than they would have paid in a competitive market.

COUNT II

VIOLATION OF SECTION 2 OF THE SHERMAN ACT (15 U.S.C. § 2)

ATTEMPTED MONOPOLIZATION

230. Plaintiff repeats and reiterates each of the allegations contained in the paragraphs above as if fully set forth herein.

231. As alleged herein, Defendant has engaged in predatory, exclusionary, and anticompetitive conduct, including but not limited to deceiving users about its privacy protection practices, secretly obtaining user data from third parties to identify and deter emerging competitive threats, engaging in covert surveillance of potential competitors' users to detect and ultimately acquire competitive threats before they became too formidable, neutralizing potential competitive threats by acquisition before they became an actual threat, and using its API as a means to exclude competition and prevent competitors from forming or growing.

232. Defendant's conduct alleged above has had an anticompetitive effect in the Social Advertising Market.

233. Defendant's conduct alleged herein has no legitimate business purpose or procompetitive effect.

234. Defendant has engaged in that conduct with the specific intent of monopolizing the Social Advertising Market.

235. Defendant has engaged in that conduct with a dangerous probability of monopolizing the Social Advertising Market.

236. Defendant's conduct has had a substantial effect on interstate commerce.

237. Plaintiff and the Class members have been and will be injured in their business or property as a result of Defendant's conduct alleged herein.

238. Defendant's violation of 15 U.S.C. § 2 has caused injury to the Plaintiff and other Class members by forcing them to pay higher prices for social advertising than they would have paid in a competitive market.

XII. PRAYER FOR RELIEF

WHEREFORE, Plaintiff, individually and on behalf of the Class of all others so similarly situated, respectfully requests judgment against Defendant as follows:

1. The Court determine that this action may be maintained as a class action under Rule 23(a), (b)(2), and (b)(3) of the Federal Rules of Civil Procedure, appoint Plaintiff to serve as Class Representative and her counsel of record to serve as Class Counsel, and direct that notice of this action, as provided by Rule 23(c)(2) of the Federal Rules of Civil Procedure, be given to the Class, once certified;

2. The unlawful conduct alleged herein be adjudged and decreed in violation of Sections 2 of the Sherman Act;

3. Plaintiff and the members of the Class be awarded damages in an amount to be trebled to the extent the law permits;

4. Plaintiff and the members of the Class be awarded equitable monetary relief, including restitution and disgorgement of all ill-gotten gains, and the imposition of a constructive trust upon, or otherwise restricting the proceeds of Defendant's ill-gotten gains, to ensure an effective remedy;

5. Permanent injunctive relief be issued pursuant to Section 16 of the Clayton Act to remedy the ongoing anticompetitive effects of Defendant's unlawful conduct;

6. Plaintiff and the members of the Class be awarded pre- and post-judgment interest as provided by law, with such interest at the highest legal rate from and after the date of service of this Complaint;

7. Plaintiff and the members of the Class recover their costs of suit, including reasonable attorneys' fees, as provided by law; and

8. Plaintiff and the members of the Class have such other and further relief as the case may require and the Court may deem just and proper.

JURY TRIAL DEMANDED

Plaintiff demands a trial by jury on all issues so triable.

Dated: January 13, 2021

Respectfully submitted,

By: /s/ Dena C. Sharp

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